

Vol. IV, Part 1.

Nos. 1-78.

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vol. 4-5  
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# HELMINTHOLOGICAL ABSTRACTS //

*incorporating*  
BIBLIOGRAPHY OF HELMINTHOLOGY  
For the Year 1935.



IMPERIAL BUREAU OF AGRICULTURAL PARASITOLOGY  
Winches Farm Drive  
Hatfield Road  
St. Albans · Eng.

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# HELMINTHOLOGICAL ABSTRACTS

INCORPORATING BIBLIOGRAPHY OF HELMINTHOLOGY

FOR THE YEAR 1935

Vol. IV, Part I.

## 1—Acta Pathologica et Microbiologica Scandinavica.

- a. ROTH, H.—“Ein Beitrag zur Frage der prenatalen Trichineninfektion.” xii (1/2), 203-215. [1935.]

(1a) As a result of feeding *Trichinella* larvae to 5 pregnant guinea-pigs, Roth was able to show that in two cases intra-uterine infection occurred. One guinea-pig died just before full term and, by digesting the 4 contained fetuses together, 4 larvae were found in the sediment. Seven offspring of the remaining 4 mothers were examined after birth and only one was found infected (19 larvae were produced by digesting the tissues), though all the mothers were infected. The author briefly reviews the literature on prenatal helminthic infections and concludes that, in the case of *Trichinella*, the phenomenon is rare. Even in the positive cases the larvae were very scanty.

B.G.P.

## 2—Advisory Leaflet. Ministry of Agriculture and Fisheries. London.

- a. ANON.—“The beet eelworm.” No. 233, 3 pp. [1935.]

(2a) A brief account is given of the “beet eelworm” *Heterodera schachtii*, its life history, the damage it causes to the host plant, its appearance on infested plants and methods of preventing its introduction and spread in beet-growing areas.

To prevent land from becoming appreciably infected with the eelworm beet (or mangolds) should not be grown more frequently than once in three, or preferably four years. On infected land the interval between crops should be from five to seven years; weeds should be kept down as far as possible and cruciferous crops should be avoided.

M.J.T.

## 3—American Journal of Hygiene.

- a. MILLER, jr., H. M.—“Experiments on acquired immunity to a metazoan parasite by use of non-specific worm materials.” xxi (1), 27-34. [1935.]
- b. LAMSON, P. D., MOLLOY, D. M. & BROWN, H. W.—“Field studies of the anthelmintic action of ortho-heptylphenol and 6-hexyl-metacresol against *Ascaris lumbricoides*, *Necator americanus* and *Trichuris trichiura*.” xxi (1), 188-199. [1935.]
- c. MCCOY, O. R.—“Artificial immunization of rats against *Trichinella spiralis*.” xxi (1), 200-213. [1935.]
- d. FOSTER, A. O. & CORT, W. W.—“Further studies on the effect of a generally deficient diet upon the resistance of dogs to hookworm infestation.” xxi (2), 302-318. [1935.]
- e. MILLER, jr., H. M.—“Transmission to offspring of immunity against infection with a metazoan (cestode) parasite.” xxi (2), 456-461. [1935.]



(3a) Miller suggests that partial protection against *Taenia taeniaeformis* in rats may be brought about by the oral or intraperitoneal introduction of material from *Hymenolepis* sp. or from *Taenia saginata*. No protection was afforded by *Diphyllbothrium* or *Dipylidium*. P.A.C.

(3b) The authors continue their study of the anthelmintic properties of hydroxy benzene derivatives, and report the results obtained with ortho-heptylphenol and 6-hexyl-metacresol. These drugs did not irritate the mucous membrane of the mouth and were administered, in 4 cc. doses, to about 100 patients infested with *Ascaris*, *Necator* and *Trichuris*.

After ortho-heptylphenol, the reduction in the egg count was 35% in ascariasis, 60% in uncinariasis and 40% in trichuriasis; after 6-hexyl-metacresol, the reductions were respectively 55%, 70% and 30%. R.H.H.

(3c) McCoy has produced a varying degree of immunity to *Trichinella spiralis* by 6 intraperitoneal injections of living trichina larvae, of heat killed larvae or of dried and powdered larvae. The immunity is directed against the intestinal stages of the parasite which, however, results in a smaller amount of muscle invasion. P.A.C.

(3d) Foster & Cort, using dogs fed a generally deficient diet, find once again that there is a lowered resistance to hookworm infestation as exhibited by an increased rate of development of the worms and increased egg production. Certain animals showed a final complete breakdown of resistance resulting in a sharp increase in egg production and the death of the dogs. They find that it is generally easier to break down the resistance of young animals by deficient diets. P.A.C.

(3e) Miller jr. is able to effect a considerable degree of resistance in rats to infestation with *Taenia taeniaeformis* by actively immunizing the mothers before mating. Immunization with onchospheres was more effective than with powdered *T. taeniaeformis* material. P.A.C.

#### 4—Annales de Parasitologie Humaine et Comparée.

- a. DOLLFUS, R. P., CALLOT, J. & DESPORTES, C.—“Infestation expérimentale de Strigiformes par un *Brachylaemus*.” XIII (1), 12-20. [1935.]
- b. HAUTEFEUILLE, J.—“Méningite vermineuse.” XIII (1), 21-27. [1935.]
- c. DOLLFUS, R. P.—“Sur quelques *Brachylaemus* de la faune française récoltés principalement à Richelieu (Indre-et-Loire).” XIII (1), 52-79. [1935.]
- d. GOHAR, N.—“Liste des trématodes parasites et de leurs hôtes vertébrés signalés dans la vallée du Nil (1).” XIII (1), 80-90. [1935.]
- e. FAURE, L.—“Dermatorragie parasitaire des bovins nord-africains due à *Setaria haemorrhagica*.” XIII (2), 113-115. [1935.]
- f. DOLLFUS, R. P., CALLOT, J. & DESPORTES, C.—“*Distoma isostoma* Rudolphi 1819, parasite d'*Astacus*, est une métacercarie d'*Orchipeum*.” XIII (2), 116-132. [1935.]
- g. PAVLOFF, P.—“Recherches sur la présence de kystes à quatre noyaux d'amibes dysentériques dans les excréments des porcelets.” XIII (2), 155-160. [1935.]

(4a) Dollfus, Callot & Desportes have succeeded in infecting Strigiform birds with a species of *Brachylaemus*, thus lending credence to the early report of *Br. aequalis* Duj. from *Tyto alba* (L.). The larval stages, in the

slug, *Arion rufus*, were fed to a screech-owl, *Strix aluco* (L.), which died a week later, yielding a single adult *Brachylaemus*, and to *Tyto alba*, which was infested with seventeen small *Brachylaemus*, some already producing eggs, at the time of its death two days later. The affinities of the species are uncertain, owing to the insufficient description and figuration of earlier species. A table is given of the measurements of this and of related species. E.M.S.

(4b) Hautefeuille reports the case of a 19 year old man who displayed symptoms of meningitis. The symptoms disappeared on the 14th day after the expulsion of an *Ascaris lumbricoides* in the stool. While the case was under observation two lumbar punctures were made and from an examination of the cerebro-spinal fluid the author concludes there exists a true verminous meningitis. There is a discussion on the pathogeny of this disease. J.N.O.

(4c) Dollfus concludes his review of the genus *Brachylaemus* [see Helm. Abs., Vol. III, No. 185e]. The present paper is devoted to a grouping of the species according to host and geographic distribution, all the information regarding the genus being gathered into a series of tables. The description and two figures of *B. opisthotrias* (Ad. Lutz) are added for purposes of comparison. There is an extensive bibliography. E.M.S.

(4d) Gohar completes under hosts a list of the trematode parasites found in the Nile Valley [see Helm. Abs., Vol. II, No. 56f]. R.T.L.

(4e) Faure records the common occurrence of haemorrhagic nodules in the skin of Tunisian cattle caused by the presence of filarial worms in the sub-cutaneous connective tissue.

This condition in cattle is observed during spring and summer and the nodules are chiefly confined to the neck, the upper region of the trunk and the rump. An examination of the worms found in these lesions showed that they belonged to *Setaria haemorrhagica*—a species producing a similar condition in the horse. D.O.M.

(4f) Dollfus, Callot & Desportes find *Distoma isostoma* occurring very commonly in *Astacus pallipes* in France. By feeding experiments they have procured its development in five carnivores—*Mustela vulgaris*, *M. foetida*, *M. furo*, the fox and the domestic cat. The adult proves to be a species of *Orchipedium*, lodging in the nasal fossae of its host. As this genus usually parasitizes the trachea of water birds, and probably does not develop normally in carnivores, no attempt is made to assign this form to any of the five known species, and the name *O. isostoma* (Rud., 1819) is tentatively given. E.M.S.

## 5—Annali d'Igiene (Sperimentale).

- a. BERTINI, G.—“L'anchilostomiasi nella Provincia di Firenze dal 1925 al 1930.” XLV (1), 32-40. [1935.]

## 6—Annals of Applied Biology.

- a. TAYLOR, E. L.—“Proceedings of the Association of Applied Biologists. II. Applied biology in the control of the worm diseases of domestic animals.” XXII (1), 168-175. [1935.]

(6a) Taylor discusses, in a non-technical manner, the control of worm diseases of domesticated animals. After showing that the margin of safety



between normal and pathological infestations is a wide one, the author states that the origin of all the trouble is to be found in overcrowding which has upset the healthy host-parasite relationship. In the absence of suitable anthelmintic treatment control depends upon hindering the accumulation of parasites in the host, and the effect of dryness in this connection is mentioned. In some instances dryness may encourage worm diseases, especially in grazing animals, by increasing the intake of infective material as the result of closer cropping for a longer period each day; by leading to a gradual accumulation of helminth eggs in the resistant stage on the ground and resulting, when the drought period is followed by moist weather conditions of sufficiently long duration for infective larvae to develop, in the mass liberation of infective material; by lowering the host's resistance to the development of the parasite through deficient nutrition. The author finally discusses some old, rule-of-thumb farming practices which are carried out without any knowledge that the benefit which accrues depends upon their influence in limiting the multiplication of parasites.

J.N.O.

#### 7—Annals and Magazine of Natural History.

- a. KERR, T.—“On *Linstowia echidnae* (Thompson, 1893) Zschokke, 1899: a cestode from the Australian ant-eater.” (Ser. 10), xv (85), 156-160. [1935.]

(7a) Kerr redescribes *Linstowia echidnae* from a Tasmanian anteater (*Tachyglossus (Echidna) setosa*). As the specimens were mature the author has been able to supplement, in several details, Zschokke's (1898) description from immature specimens. There is a brief discussion on the systematics of the genus *Linstowia*.

J.N.O.

#### 8—Annual Report (25th-26th) of the Quebec Society for the Protection of Plants.

- a. CAMERON, T. W. M.—“Nematodes and plants.” [Reprint 10 pp.] [1935.]

#### 9—Arbeiten über Physiologische und Angewandte Entomologie aus Berlin-Dahlem.

- a. RIGGERT, E.—“Untersuchungen über die Parasiten der Fritfliege.” II. (1), [Reprint 23 pp.] [1935.]

(9a) Riggert deals with the nematode, *Tylenchinema oscinellae*, a mite and several Hymenoptera in an investigation into the parasites of the Frit fly. In 1930 the percentage of flies parasitized was 1·9, the incidence of infection being highest during October. In 1931 dissections showed that 88·9% of the insects harboured not more than 2 worms per host and the percentage infected was 8·7 while September produced the highest incidence of parasitism. In confirmation of Goodey's investigations the author shows that the worm causes complete sterilization of the host's gonads but thinks that, as a natural limiting factor of Frit fly multiplication, it is of moderate importance only.

J.N.O.

## 10—Archiv für Hydrobiologie und Planktonkunde.

- a. SCHNEIDER, W.—“Voyage de Ch. Alluaud et P. A. Chappuis en Afrique Occidentale Française (Déc. 1930—Avril 1931). VI. Freilebende Nematoden.” xxviii, 1-20. [1935.]

(10a) Schneider describes some fresh-water nematodes collected by Chappuis in the region of the upper reaches of the rivers Niger, Comoë and Sassandra in French Sudan and the Ivory Coast.

Amongst the 16 samples examined, which contained only worms over 1 mm. long, the following genera were represented:—*Mononchus*, 2 spp., *Ironus*, 1 sp., *Dorylaimus*, 6 spp., *Actinolaimus*, 7 spp. The following species new to science are described and figured:—*Dorylaimus (Longidorus) chappuisi* n. sp., *Actinolaimus costatus* n. sp., *A. filippewi* n. sp., *A. conformis* n. sp., *A. tenuis* n. sp. and *A. papillatus* n. sp. *A. macrolaimus* Micol., 1925 is renamed *A. micoletzkyi* nom. nov. The significance of these finds from the point of view of oecology and geographical distribution is discussed in a final section of the paper.

T.G.

## 11—Archiv für Schiffs- und Tropen-Hygiene.

- a. SALAH, M. & HASSAN, A.—“The action of antimony on the liver with special reference to its use in the treatment of schistosomiasis.” xxxix (1), 1-14. [1935.]
- b. OTTO, I. H. & JI, TSCHAN TSCHING.—“Über die Behandlung der menschlichen Infektion mit *Clonorchis sinensis* (Kobbold) mit Goldeinspritzungen. (Vorläufige Mitteilung).” xxxix (3), 99-106. [1935.]

(11a) Therapeutic antimony does not produce in bilharzia cases any disturbance of function of clinically normal livers or of cirrhotic livers. It does not aggravate jaundice or produce any appreciable depletion of liver glycogen. Indeed it tends to improve and even restore to normal liver functions previously disturbed by bilharzia infection.

R.T.L.

## 12—Archives de l'Institut Pasteur d'Algérie.

- a. BERGEROT, J.—“Le foyer de bilharziose de Djanet, pays Ajjer (Sahara algérien).” xiii (1), 47-67. [1935.]

## 13—Archivio Italiano di Scienze Mediche Coloniali.

- a. FRANCHINI, G.—“Su di una microfilaria della rana (*Rana esculenta*).” xvi (2), 81-85. [1935.]
- b. SARNELLI, T.—“Sui reperti parasitarii negli esami coprologici praticati nell'Istituto dal 1° novembre 1933 al 31 luglio 1934.” xvi (2), 125-134. [1935.]

## 14—Berliner Tierärztliche Wochenschrift.

- a. SALOMON, S.—“Beziehungen zwischen Magenwurmseuche und Gehörnbildung beim Rehbock.” li (4), 53-54. [1935.]
- b. BUGGE, G.—“Die Wanderungen der Leberegel in den Organen der Schlachttiere.” li (5), 65-68. [1935.]

(14a) Various anomalies in the growth of the antlers in roebuck are not infrequently met with, e.g., the first-year antler, on one or both sides, may be



retained during the second year. From his own observations Salomon concludes that stomach-worm infection is often associated with these anomalies.

B.G.P.

(14b) While not denying that young *Fasciola hepatica* may pierce through the intestinal wall and enter the liver from the body cavity, Bugge's observations lead him to think that the usual route is via the portal vein, the smaller roots of which are entered within the intestinal wall. Within the liver the flukes emerge from the portal system and wander about in the parenchyma. Young flukes may also travel via the lymphatics to the mesenteric lymph glands, especially in cattle, where they usually die before maturity. Less commonly they enter the hepatic veins and travel via the heart to the lungs where quite large and often calcified cysts result. These cysts may communicate with the bronchi thus giving egress to the eggs. The *Fasciola* from the lungs, even when mature, are always small—about half the size of liver forms. Finally, by migration into the pulmonary veins the flukes may be carried via the aorta to any organ of the body and to foetuses in the uteri, though here again it is possible that the flukes may enter the uteri directly from the abdominal cavity. The covering of sharp spines, present in the metacercaria, is the essential characteristic which renders possible these abnormal migrations.

B.G.P.

#### 15—Biochemische Zeitschrift.

- a. SMORODINZEW, I. A. & BEBESCHIN, K. W.—“ Beiträge zur Chemie der Helminthen. II. Mitteilung: Untersuchungen der chemischen Zusammensetzung einzelner Teile des *Taenia saginata*.” CCLXXVI (4), 271-273. [1935.]

(15a) Smorodinzew & Bebeschin have carried out preliminary chemical analyses on the anterior, middle and posterior portions of the *Taenia saginata* strobila. The anterior portions gave the highest results for lipoids and total nitrogen, the posterior portions for dry residue and ash.

R.H.H.

#### 16—Bulletin. Ministry of Agriculture and Fisheries. London.

- a. ANON.—“ Some diseases of poultry.” No. 6, v+54 pp. [1935.]

#### 17—Bulletins et Mémoires de la Société Médicale des Hôpitaux de Paris.

- a. PAGNIEZ, P., PLICHET, A., LAPLANE, R. & SALLES, P.—“ Echinococcose métastatique du poumon.” LI (5), 221-229. [1935.]
- b. PINARD, M., DEBRAY, C. & CORCOS, A.—“ Kystes hydatiques en voie de calcification dans le foie d'une malade présentant un anévrisme syphilitique de l'aorte.” LI (12), 597-601. [1935.]

#### 18—Bulletin de la Société de Pathologie Exotique.

- a. COUTELEN, F. & PIEDELIÈVRE, R.—“ Un cas de mort subite chez un porteur de kyste hydatique du foie.” XXVIII (2), 103-107. [1935.]
- b. COUTELEN, F.—“ La longévité de la filaire *Loa loa* (Guyot 1778) et des embryons de filaires. A propos d'un cas de filariose diurne.” XXVIII (2), 126-134. [1935.]



- c. JOYEUX, C. & CABASSU, J.—“Étude sur la filariose des chiens de Camargue. Fréquence de *Dirofilaria immitis* (Leidy).” XXVIII (3), 187-193. [1935.]
- d. TISSEUIL, J.—“De la longévité des microfilaires de la sarigue *Philander* dans la circulation générale.” XXVIII (3), 193-194. [1935.]
- e. LUTROT, M.—“Note sur deux foyers malgaches de bilharziose vésicale à *Schistosomum haematobium*. ” XXVIII (3), 243-245. [1935.]
- f. POISSON, H., GÉNEVOIS & LAMBERTON, R.—“Note sur un cas particulier d'hépatomégalie chez un mulet.” XXVIII (3), 246-247. [1935.]

(18c) Joyeux and Cabassu have found adult *Dirofilaria immitis* once in a fox and 19 times out of 26 in dogs in the neighbourhood of Camargue in the South of France.

R.T.L.

(18d) Six to 11 days after injection, in two instances, of blood rich in microfilariae into a young opossum only a single microfilaria was found.

R.T.L.

(18f) Poisson, Gènevois & Lamberton briefly record a case of hepatic cirrhosis in a mule. This they associate with toxins due to *Cylicostomum tetracanthum*.

R.T.L.

## 19—Canadian Journal of Research.

- a. SWALES, W. E.—“The life cycle of *Fascioloides magna* (Bassi, 1875), the large liver fluke of ruminants, in Canada. With observations on the bionomics of the larval stages and the intermediate hosts, pathology of *Fascioloides magna*, and control measures.” XII (2), 177-215. [1935.]
- b. KENNEDY, A. H. & LAW, R. G.—“The differential blood changes in ascariasis in foxes.” XII (3), 277-285. [1935.]

(19a) Swales has made a study of *Fascioloides magna* and has elucidated the life cycle of this trematode in an endemic area of Alberta, North America.

A brief historical review of the parasite, its present day distribution and definitive hosts are given. As the adult was the subject of an intensive study by Stiles in 1894, particular attention has been paid to the non-parasitic stages and the morphology and bionomics of egg and larval stages are described. In addition to snails previously reported as vectors by other investigators the author has found two fresh-water gastropods, *Fossaria parva* and *Stagnicola palustris nuttalliana* to act as intermediate hosts and the oecology of the snails is described. From artificial infestations of both hosts in aquaria cercarial emergence was noted 49 to 58 days from the time of miracidial attack.

From a histopathological study it appears that the parasite finds a normal host in members of the Cervidae as it produces no undue tissue reaction in the liver and passes ova which are evacuated into the alimentary canal from the fluke cavity in the liver *via* the bile duct system. In large Bovidae, on the other hand, the parasite causes a severe tissue reaction, the lesion assuming the form of a closed fibrous cyst from which eggs are unable to pass, and the ability of the fluke to reproduce is destroyed. From these observations the author concludes that fascioloidiasis in large Bovidae occurs probably only in the presence of Cervidae.

Sheep, domestic rabbits and guinea pigs were artificially infested and in an addendum to his paper the author notes that *F. magna* is very pathogenic to sheep owing to weak liver tissue reaction which enables the parasite to reach

sexual maturity in lightly infested hosts and the ova to pass into the alimentary canal. Hence sheep are able to play a rôle similar to that of the Cervidae in the dissemination of the fluke. Discussing control measures the author considers anthelmintic medication would probably be entirely ineffective owing to the parasite's location in the host tissue. To protect Bovidae all Cervidae should be eliminated from grazing lands. The destruction of snails by applications of copper sulphate is also recommended, with reservations.

J.N.O.

(19b) Kennedy & Law have studied the reaction of the various blood cells to *Toxascaris leonina* infection in foxes. Embryonated eggs were given orally to 8 foxes in doses of 500, 1,000 or 2,000 per animal and 2 foxes were kept as controls. The results show that, while the numbers of red blood cells and amounts of haemoglobin remained within normal limits, the proportion of basophiles rose to a marked degree (as high as 69.5% of the total leucocyte count). This increase is apparently associated with the number of eggs given, the largest dose producing the highest, and the smallest dose the lowest, proportion. There was a marked relationship between the proportions of neutrophiles and lymphocytes which tended to fluctuate in opposite directions. The increase in the total number of white blood cells above the normal appeared to be greatly influenced by the increase in the proportion of basophiles; the lymphocytes and neutrophiles influenced the increase to a minor degree only.

J.N.O.

## 20—Chinese Medical Journal.

- a. ANDREWS. M.N.—“The examination of faeces for the ova of *Schistosoma japonicum*.” XLIX (1), 42-46. [1935.]
- b. WU, L. C.—“Chronic salpingitis caused by *Oxyuris vermicularis*. Report of a case.” XLIX (3), 256-259. [1935.]

(20a) In 76 cases of *Schistosoma japonicum* infection ova were found in 39% by direct smear, in 67% by sedimentation and in 100% by hatching the miracidia in accordance with Meleney & Faust's technique. The reappearance of ova in the stools after weeks or months of negative findings is illustrated by 3 cases.

R.T.L.

## 21—Comptes Rendus des Séances de l'Académie des Sciences.

- a. DORIER, A.—“Sur le passage à la vie latente des larves de Gordiacés.” [Correspondence.] CC (6), 492-494. [1935.]

(21a) Dorier has made numerous observations on the phenomena which accompany the passage from active to latent life in Gordiids. He concludes that the so-called intestinal sac of the larva is really a secretory apparatus, which empties its contents at the moment active life ceases, and that the differences in behaviour of larvae studied are in strict relationship with the nature and special properties of the substances secreted by them. Thus in *Gordius aquaticus* the secretion hardens slowly under the action of water and allows encystment of the larva while in *Parachordodes gemmatus* and *P. violaceus* it instantly coagulates in contact with water and assumes the form of long filaments which appear to anchor the larva to the substratum.

J.N.O.



## 22—Comptes Rendus des Séances de la Société de Biologie.

- a. ALMEIDA, J. LINS DE.—“Notes helminthologiques.” CXVIII (3), 285-286. [1935.]
- b. LUTZ, A.—“Evolution du *Clinostomum heluans*.” CXVIII (3), 289-290. [1935.]
- c. AGGÉRY, B.—“Polypodes, anguillules et bactéries.” CXVIII (8), 761-763. [1935.]
- d. LEMAIRE, G. & RIBÈRE.—“Méthode simple et aseptique pour les essais de culture *in vitro* des scolex, applicable à l'étude des phénomènes biologiques susceptibles d'être observés de part et d'autre d'un ultra-filtre.” CXVIII (11), 1080-1082. [1935.]
- e. LEMAIRE & RIBÈRE.—“Sur la composition chimique du liquide hydatique.” CXVIII (15), 1578-1579. [1935.]

(22a) According to Almeida *Quasistrongylus rheae* Maplestone, 1932 is identical with *Deletocephalus dimidiatus* Diesing, 1851 and the generic name *Homoscaphis* Canavan, 1933 is a synonym of *Odhneriotrema* Travassos, 1928 (Clinostomidae). R.T.L.

(22b) The dicranocercaria of *Clinostomum heluans* differs from the cercaria of schistosomes and strigeidae in originating within rediae. It develops in various species of *Planorbis* and has been described under the name *Ocellifera*. In Brazil it encysts in the tissues of *Bufo crucifer* and several species of small fresh-water fishes. Adults develop in herons fed upon infected fishes. R.T.L.

(22c) Aggéry describes a disease of fern leaves caused by a species of the genus *Aphelenchus* which enters the stomata on the under surface of the leaves. Bacteria form a secondary infection and extend throughout the leaf tissues causing discoloured patches. It is suggested that damage usually attributed to *Heterodera* may be caused by secondary invasions of bacteria and fungi. M.J.T.

(22d) Lemaire & Ribère describe a technique for culturing hydatid scolices *in vitro* aseptically. The scolices are withdrawn from the cyst with a veterinary syringe and placed in a glass tube 9 cm. by 12 mm. the bottom of which is closed by a film of collodion. This tube is placed in a wider (21 mm.) round-bottomed tube having a constriction near the bottom, as used by bacteriologists for culture on potato. The smaller tube rests on the constriction. Serum or other culture medium is placed in the wide tube, to a level above that of the constriction, and thus diffuses up through the collodion film which acts as an ultra-filter. The outer tube is closed by a plug of cotton wool. B.G.P.

(22e) Lemaire & Ribère have studied the chemical composition of hydatid fluid and their results differ in many instances from those reported by previous authors. In a number of cases no trace of cholesterol or inositol could be detected, whereas creatinine, ammonium salts and lecithin (not hitherto recorded) were always present. The authors have, further, demonstrated that hydatid fluid contains proteolytic and glycolytic enzymes, the presence and activity of which give a satisfactory explanation of the variable results obtained for albumin and glucose. R.H.H.

## 23—Deutsche Medizinische Wochenschrift.

- a. PRÜMM, A.—"Über hochgradige Eosinophilie bei *Taenia saginata*." LXI (10), 376-377. [1935.]

## 24—Deutsche Tierärztliche Wochenschrift.

- a. SCHOOP, G.—"Massenvergiftung von Silberfüchsen." XLIII (1), 7-8. [1935.]  
 b. WETZEL.—"Die Entwicklung der Geflügelbandwürmer und ihre Bekämpfung." XLIII (12), 188-191. [1935.]

(24a) Schoop reports on the death of 30 out of 39 silver foxes in unusual circumstances. The farmer had used a wood preservative, Xylamon, not only to treat the wood of their pens but, incorrectly, to spray their fur as an insecticide; he had simultaneously dosed them with worm capsules containing some chlorinated aromatic hydrocarbon. Schoop found that neither of these treatments alone was toxic and concludes that the extraordinary mortality was due to their use simultaneously. He advises against the misuse of wood preservatives and against the combination of several radical treatments of delicate fur animals. R.G.P

(24b) Wetzel discusses the development of certain cestodes of birds and means of control. *Davainea proglottina* and *Raillietina cesticillus* both have a snail as intermediate host. He suggests a means of excluding the snails from the chicken runs by having the lower portion of the boundary of wood and only the upper portion of wire netting. In the case of *Davainea proglottina* the cysticercoid develops in 20 to 22 days in warm weather in the snail and needs 17 days in the fowl to become adult. *Choanotaenia infundibulum* has the stable fly as intermediate host. P.A.C.

## 25—East African Medical Journal.

- a. WATSON, W. H.—"Drainage as a controlling factor in the spread of hookworm." XI (10), 308-315. [1935.]  
 b. BOASE, A. J.—"Ocular filariasis." XI (10), 326-328. [1935.]

(25a) An increase of from 42% to 89·8% in the incidence of hookworm infestation at Karonga in Nyasaland is attributed by Watson to the gradual raising of the level of Lake Nyasa owing to the silting up of the Shire River which has resulted in an increase in the level of the water table. Villages have become permanently surrounded by swamps. R.T.L.

(25b) Boase records a case of pain and loss of vision in the left eye with intense ciliary congestion, hazy cornea, profuse keratic precipitates and posterior synechiae. It is thought that the presence in the blood of *Filaria perstans* embryos may have been only a coincidence. R.T.L.

## 26—Indian Journal of Veterinary Science and Animal Husbandry.

- a. RAO, M. A. N. & AYYAR, S.—"Ova of schistosomes in the faeces of a dog. A preliminary report." v (1), 23-27. [1935.]  
 b. RAO, M. A. N.—"A note on *Taenia solium* Linneus, 1758 in the Madras Presidency." v (1), 28-29. [1935.]  
 c. RAO, M. A. N.—"Lung flukes in two dogs in the Madras Presidency." v (1), 30-32. [1935.]  
 d. BHALERAO, G. D.—"On the occurrence of *Stilesia vittata* (Cestoda) in ovines in India." v (1), 33-34. [1935.]



- e. BHALERAO, G. D.—“ Helminth parasites of the Indian elephant from the Andamans and Burma.” v (1), 35-48. [1935.]
- f. BHALERAO, G. D.—“ On two new monostomes (Trematoda) from avian hosts in British India.” v (1), 49-63. [1935.]

(26a) Schistosomiasis, as a cause of dysentery in the dog at Jubbalpore in North India, is recorded by Rao & Ayyar. The ova are suboval with one side flattened and resemble those described by Rao & Ayyar in 1933 as *S. suis*. The authors point out that the recent description by Bhalerao of *S. japonicum* from pigs in India accords better with that of *S. suis* or of *S. incognitum* Chandler, 1926. R.T.L.

(26b) In the Madras Presidency *Cysticercus cellulosae* occurs in the pig and in the dog. That the adult *Taenia solium* occurs in man in the Presidency is shown by a case identified by Rao who believes that this tapeworm is much commoner there than has been previously recognized. He recalls that Wright of the Madras Ophthalmic Hospital had found that 3% to 6% of cases in that hospital had ocular cysticercosis. R.T.L.

(26c) Two cases of Paragonimiasis in dogs have been found by Rao in Malabar and Coimbatore on the west coast of the Madras Presidency. Rao suggests that *P. westermanni* may have been overlooked in human cases diagnosed as due to tubercules. R.T.L.

(26d) *Stilesia vittata* is common in sheep and goats as well as camels in India, according to Bhalerao. R.T.L.

(26e) From the Indian elephant Bhalerao records 5 trematodes, 1 cestode and 3 nematodes. A new species *Pfenderius birmanicus* is described. R.T.L.

(26f) Although sixteen species of *Notocotylus* are known none have been recorded hitherto from India. Bhalerao describes *N. babai* from the common kite and gives a differential table for the species of the genus. From the magpie *Urocissa favirostris cucullata* he records *Cyclocoelum sharadi* n. sp. and tabulates the characters of the eighteen valid species of the genus. R.T.L.

## 27—Indian Medical Gazette.

- a. MOORTHY, V. N.—“ The influence of fresh bile on guinea-worm larvae encysted in cyclops. A preliminary report.” LXX (1), 21-23. [1935.]

(27a) Fresh bile from a species of fish belonging to the genus *Barbus* when used undiluted kills cyclops in 1 or 2 minutes and the metamorphosed larvae of *Dracunculus medinensis* in 2 or 3 hours. It is reported that when infected cyclops are fed to these fishes the liberated larvae appear to undergo further development in the intestinal tract. R.T.L.

## 28—Indian Veterinary Journal.

- a. DATTA, S. C. A.—“ The etiology of so-called ‘ Calcutta sore ’ of cattle.” [Abstract of article read before the Indian Science Congress held at Calcutta from 2nd to 6th January, 1935.] XI (4), p. 267. [1935.]
- b. RAHIMUDDIN, M.—“ ‘Gid’ in sheep.” XI (4), p. 280. [1935.]

(28a) Adult nematodes, microfilariae and ova have been repeatedly seen in tissues from the hump sores of cattle in Assam. The worms are said by Datta to differ from the *Stephanofilaria* reported by Bubbermann & Kraneveld but its exact identity has not yet been determined. R.T.L.

## 29—Journal of the American Medical Association.

- a. FANTUS, B.—“The therapy of the Cook County Hospital: Uncinariasis; trichiniasis. Discussion of previously published articles.” CIV (6), 472-474. [1935.]

## 30—Journal of the American Veterinary Medical Association.

- a. HAYS, I. M.—“Some observations on filariasis and its treatment.” LXXXVI (1), 55-63. [1935.]
- b. McCUNE, E. F.—“Hydatid disease in wooler.” LXXXVI (2), 210-211. [1935.]
- c. HANSON, K. B. & McBLAIN, jr., W. G.—“Use of elevated wire floors in controlling lungworm infestation in foxes.” LXXXVI (4), 463-473. [1935.]

(30a) Having found that tartar emetic could not be tolerated by dogs although it had a very specific action against both adults and larvae of *Dirofilaria immitis* Hays claims to have “evolved” a double antimony salt which is well tolerated and appears to be even more destructive than tartar emetic but he does not disclose its chemical composition. R.T.L.

(30c) One of the most important diseases of ranch-raised foxes in Canada is lungworm infestation due to *Eucoleus aerophilus*. *Crenosoma vulpis* occurs only on a few farms. When foxes are confined to pens with elevated wire floors these infections are effectively prevented. R.T.L.

## 31—Journal of the Council for Scientific and Industrial Research.

- a. GORDON, H. McL.—“A note on the treatment of tapeworm (*Moniezia* spp.) infestation of sheep.” VIII (1), 21-24. [1935.]

(31a) Gordon finds that arsenious sulphide is very efficient in removing *Moniezia* from sheep. It is administered either in powder form or suspended in copper sulphate solution. The dose used was 0.5 gm. It proved 100% effective and acted within 26 hours. R.T.L.

## 32—Journal of the Egyptian Medical Association.

- a. EMARA.—“Toxicity of carbon tetrachloride.” XVIII (1), 3-14. [1935.]
- b. MOHAMED, A. S.—“Note on pathological findings in a case of carbon tetrachloride poisoning.” XVIII (1), 15-16. [1935.]
- c. HILMY, I. S.—“The microscopic examination of faeces for helminthic infection.” XVIII (1), 39-47. [1935.]
- d. AZIM, A.—“On a schistosomatid cercaria from *Melania tuberculata* Muller 1774.” XVIII (3), 174-179. [1935.]

(32c) Hilmy briefly summarizes 12 different techniques which have been introduced for the examination of faeces for helminth eggs. The methods of Lane and Khalil are compared. Results obtained from 521 cases gave 40.31% as positive by Lane's technique as contrasted with 37.43% by that of Khalil. 32 of the cases were positive by Lane's method but negative by Khalil's. 15 were positive by Khalil's method but negative by that of Lane. R.T.L.

(32d) A fork-tailed, eye-spotted cercaria in *Melania tuberculata* from the Dakhla Oasis developing in sporocysts is described. Negative results from experimental infections of rats, guinea pigs and herons lead Azim to the generalization that the definitive host is neither a mammal nor a bird. R.T.L.



## 33—Journal of Helminthology.

- a. CLAPHAM, P. A.—“On the experimental transmission of *Syngamus trachea* from starlings to chickens.” XIII (1), 1-2. [1935.]
- b. CLAPHAM, P. A.—“The treatment of gapeworm disease.” XIII (1), 3-8. [1935.]
- c. CLAPHAM, P. A.—“On nodules occasioned by gapeworm in pheasants.” XIII (1), 9-12. [1935.]
- d. OLDHAM, J. N.—“On the occurrence of *Rhabditis coarctata* (Nematoda) on caterpillars in the Marquesas Islands.” XIII (1), 13-18. [1935.]
- e. GOODEY, T.—“On *Cylindrogaster curzii* n. sp., a saprophagous nematode.” XIII (1), 19-24. [1935.]
- f. ANDREWS, M. N.—“The complement fixation reaction in *Schistosoma japonicum* with cercarial antigen prepared from *Oncomelania hupensis*.” XIII (1), 25-40. [1935.]
- g. TETLEY, J. H.—“Ecological studies on *Nematodirus* species in sheep in Manawatu district, New Zealand.” XIII (1), 41-58. [1935.]

(33a) Using the earthworm *Eisenia foetida* as an intermediate host Clapham has produced 100% infections in chickens with gapeworms derived from starlings. Infected starlings are regarded by Clapham as an important factor in the spread of gapes in poultry. R.T.L.

(33b) Clapham has found that a mixture containing 33 $\frac{1}{3}$ % to 50% of garlic oil in linseed oil given by a fine pipette in doses of one third minim three times a day proved a satisfactory treatment for gapeworms. Heavily infected birds ceased to gape during the first day and the birds were cured in 3 days. All the eggs in the gapeworms were sterilized and the worms were ruptured and coughed up. Carbon tetrachloride procured considerable relief to chickens in the last stages of the disease but did not eradicate the worms. A 5% solution given in 1 cc. doses twice daily was the most effective method of administration. R.T.L.

(33c) Adult pheasants are frequently affected by gapeworms. The tracheal lining shows nodules which may reach the size of a pea and may produce asphyxiation. R.T.L.

(33d) Oldham records the occurrence of *Rhabditis coarctata* on caterpillars collected in the Marquesas Islands. The encysted nematodes were attached, singly or in groups, to the exoskeleton of the caterpillars which were found burrowing in the fruits of the Tahitian chestnut (*Inocarpus edulis*). The method of infestation by this species, hitherto recorded as a coprophagous form, remains a matter of conjecture. J.N.O.

(33e) Goodey describes and figures a new species of saprophagous nematode, *Cylindrogaster curzii* n. sp., living on an agar medium, which came originally from rotting tissues of grafts of *Manihot utilisima* (bitter cassava) grown in Italian Somaliland. The new species is closely related to *C. longistoma*, the type species, in general structure but the chief distinguishing feature is the character of the male tail which is short and carries a fine terminal process. Details are given on the distribution and arrangement of the male caudal papillae. In the account of the pharynx and oesophagus use is made of certain terms recently introduced by Steiner and others to denote the various parts. T.G.

(33f) Andrews has examined by means of the complement fixation reaction 49 human and 5 canine sera suspected of carrying *Schistosoma japonicum*. She used either bilharzial cercarial antigen or one made from infected livers of *Oncomelania hupensis*, the intermediate host of *S. japonicum* in China. These antigens are specific for the species for no positive results were obtained with positive Wassermann sera or from other helminthic infections. Fixation occurred only when ova were demonstrable in the stool. There were, however, 13 cases, passing ova, which gave negative complement fixation reactions, showing that such results do not necessarily preclude the presence of infestation. P.A.C.

(33g) Tetley's oecological studies show that species of *Nematodirus* are almost entirely confined to lambs under the age of 9 months. Greatest numbers were found in lambs of 3 to 6 months of age after which a decline in numbers set in and at 9 months the infection had almost completely disappeared. This loss is attributed to an acquired immunity and not to the development of an age resistance. No outward symptoms of infection were observed in heavily infected lambs and it is concluded that the early development of resistance to superinfection is instrumental in keeping the infection below a dangerous level. D.O.M.

#### 34—Journal of Laboratory and Clinical Medicine.

- a. KELLER, A. E.—“The occurrence of eggs of *Heterodera radiculicola* in human feces.” *xx* (4), 390-392. [1935.]
- b. LEVINE, J. & MARIN, R. A.—“Carcinoma and schistosomiasis of the appendix.” *xx* (6), 602-605. [1935.]

(34a) Keller records the finding of eggs of *Heterodera radiculicola* in 34 out of 44,380, and 5 out of 6,441 faecal specimens from white people and negroes respectively in Mississippi. M.J.T.

#### 35—Journal of the Ministry of Agriculture. London.

- a. BLENKINSOP, A.—“Observations on potato-sick soils in Devon and Cornwall.” *xli* (12), 1187-1189. [1935.]

(35a) Blenkinsop records the results of adjustment of chemical balance of potato-sick land in Devon and Cornwall by the application of heavy dressings of potash.

Chemical analysis showed the soils to belong to the class of high phosphate and low potash levels. A dressing of nearly 12 cwt. of sulphate of potash was given to half a plot of potato-sick land; the whole plot had previously been dressed with dung and mixed artificials. The yield from the half plot with extra potash was 14 tons 0½ cwt. per acre, and from the control half 1 ton 12½ cwt. per acre. Cysts were plentiful in both cases. A second good yield was obtained from the plot with extra potash in the succeeding year. Similar results in growth and yield were obtained by heavy dressings of potash in the following year both on potato-sick land and on land uninfected by *H. schachtii*. It is suggested that eelworm should be regarded as an accentuating though powerful factor accessory to adverse soil conditions. M.J.T.



## 36—Journal of Parasitology.

- a. TYZZER, E. E.—“Viewpoints and orientation in parasitology.” *XXI* (1), 1-9. [1935.]
- b. COLLINS, W. W.—“A description of *Cercaria flexicorpa* n. sp.” *XXI* (1), 18-20. [1935.]
- c. DAVIS, N. C.—“An investigation of possible vectors of *Wuchereria bancrofti* (Cobbold) in Bahia, Brazil.” *XXI* (1), 21-26. [1935.]
- d. WALTON, A. C.—“The Nematoda as parasites of Amphibia. II.” *XXI* (1), 27-50. [1935.]
- e. McMULLEN, D. B.—“The life cycle and a discussion of the systematics of the turtle trematode, *Eustoma chelydrae*.” *XXI* (1), 52-53. [1935.]
- f. McINTOSH, A.—“*Odneriotrema incommodum* (Leidy, 1856), a trematode from the mouth of *Alligator mississippiensis* (Daudin).” *XXI* (1), 53-55. [1935.]
- g. McINTOSH, A.—“A new species of trematode, *Urotocus fusiformis* n. sp., from the mourning warbler.” *XXI* (1), 55-56. [1935.]
- h. GRAHAM, G. L.—“*Capillaria* infestations in New Jersey pheasants.” *XXI* (1), 61-62. [1935.]
- i. BENNETT, H. J.—“Four new trematodes from reptiles.” *XXI* (2), 83-90. [1935.]
- j. SKRJABIN, K. I. & PETROW, A. M.—“*Parhamatospiculum bubicola* n. sp., a new nematode from birds.” *XXI* (2), 91-94. [1935.]
- k. POLOGENTSEV, P. A.—“On the nematode fauna of the shrew-mouse, *Sorex araneus* L.” *XXI* (2), 95-98. [1935.]
- l. MUELLER, J. F.—“A new harmostome adolesearia from *Campeloma decisum* Say.” *XXI* (2), 99-102. [1935.]
- m. LI, H. C.—“The taxonomy and early development of *Procamallanus fulvidraconis* n. sp.” *XXI* (2), 103-113. [1935.]
- n. MUELLER, J. F.—“A *Diphyllbothrium* from cats and dogs in the Syracuse region.” *XXI* (2), 114-121. [1935.]
- o. HUNNINEN, A. V.—“A method of demonstrating cysticercooids of *Hymenolepis fraterna* (H. nana var. fraterna Stiles) in the intestinal villi of mice.” *XXI* (2), 124-125. [1935.]
- p. CURRAN, J. A., CONNERY, J. E. & GOLDWATER, L. J.—“A study of intestinal parasitism in New York City.” *XXI* (2), 126-127. [1935.]
- q. GRAHAM, G. L.—“*Giardia* infections in a nematode from cattle.” *XXI* (2), 127-128. [1935.]
- r. LANDSBERG, J. W. & CROSS, S. X.—“The blood picture in acute fatal infestations with *Ancylostoma caninum*.” *XXI* (2), 130-132. [1935.]
- s. VERGEER, T.—“The origin of the genus *Diplogonoporus* Lönnberg, 1892.” *XXI* (2), 133-135. [1935.]

(36a) In a general survey of parasitology Tyzzer suggests that the science has not received due recognition, partly through aesthetic distaste and partly through insufficient publicity. He discusses the qualifications required in the parasitologist and the methods involved in research; in the latter connection he deprecates mathematical methods as being often inappropriate—“The precision of a method furnishes no guarantee of its appropriateness.” He puts in a plea for research in pure science, and for liberalism and breadth of view (as against narrow specialism) in the policy of scientific journals. B.G.P.

(36b) In 25 specimens of *Helisoma trivolvis* (Say) out of 5,000 Collins found a pharyngeal monostome longifurcate cercaria which he describes as *Cercaria flexicorpa* n. sp. R.T.L.

(36c) Davis produced experimentally proboscis infections with *Filaria bancrofti* in *Culex fatigans*, *Mansonia* (*Rhynchotaenia*) *justamansonia* and *Anopheles* (*Nyssorhynchus*) *albitalis*. Advanced development of larvae took

place occasionally in *Anopheles* (*Nyssorhynchus*) *bachmanni* and in *Culex nigripalpus*. - A slight degree of development, followed by degeneration, occurred in *Aedes* (*Stegomyia*) *aegypti* and in *Aedes* (*Ochlerotatus*) *fluviatilis*. No metamorphosis was noted in *Aedes* (*Ochlerotatus*) *taeniorhynchus* or in *Aedes* (*Ochlerotatus*) *scapularis*. Invasion of the thorax occurred only once in *Aedes taeniorhynchus* and never in *Aedes scapularis*. R.T.L.

(36d) Walton reviews the nematodes of Amphibia which belong to the Filarioidea, Spiruroidea, Strongyloidea, Dioctophymoidea and Trichinelloidea and adds a host list. The new species *Camallanus pipientis* from *Rana pipiens*, *Oswaldocruzia* (*bialata*) *natalensis* from *Rana delandii* and *Capillaria brevicollis* and *C. inequalis* from *Triturus viridescens* are described. R.T.L.

(36e) As the type of *Eustomos* MacCallum, 1921 was evidently greatly distorted it is redescribed and differentiated from other genera of the Plagiorchiinae. The Xiphidiocercaria develops in sporocysts in *Lymnaea stagnalis appressa*, *Stagnicola emarginata angulata* and *Bulmina megasoma* in Douglas Lake, U.S.A. where the turtles are naturally infected. R.T.L.

(36f) Leidy's *Distomum incommodum* for which Canavan recently proposed the genus *Homoscaphis* is in McIntosh's opinion congeneric with *Odhneriotrema microcephala* (Travassos, 1922). Canavan's interpretation of certain structures is questioned. R.T.L.

(36g) McIntosh describes *Urotocus fusiformis* n. sp. from the bursa Fabricii of *Oporornis philadelphia*. R.T.L.

(36h) *Capillaria annulata* (Molin, 1858) is reported from pheasants in the United States for the first time although it is known there in chickens, turkeys, quail, grouse and partridge. A fibrinous pseudomembrane covered the mucosa of the buccal cavity, tongue, oesophagus, proventriculus and crop which was extensively necrosed. R.T.L.

(36i) A key is given for the 4 species of the genus *Protenes*. Two new species, *P. villosus* and *Cercorchis singularis*, are described from *Pseudemys elegans*. A new genus *Megacustis* is placed in the Plagiorchiidae for *M. multispinosus* n. sp. from *Anolis carolinensis*. It is closely related to *Microderma*. *Neochasmus labeosus* n. sp. forms a second species in the genus and is found in *Natrix rhombifera*. R.T.L.

(36j) *Parhamatospiculum bubicola* from owls is a new and second species in the genus. It differs from *P. nodulosum* (Rud.) chiefly in the structure of the left spicule. R.T.L.

(36k) *Crenosoma skrjabini* n. sp., found by Pologentsev in the lungs of a shrew, differs from the other species of the genus in having no striae and spines on the cuticular ridges and in having much smaller spicules. *Trichocephalus busuluk* n. sp. from the caecum is distinguished by its small size and cannot be identified with *Capillaria incrassatum* Diesing, 1851 as the spicular sheath is furnished with spines. Encysted larvae of *Porrocaecum* are also described from the muscles, liver and spleen of the same host. D.O.M.

(36l) *Cercariaeum constantiae* n. sp. which occurs in 100% of the gastropod *Campeloma decisum* at Constantia N.Y. is described. R.T.L.



(36m) The 9 species of the genus *Procamallanus* are reviewed. A new species *P. fulvidraconis* from *Pseudobagrus fulvidraco* is included. The development of this new species in various species of cyclops is described.

R.T.L.

(36n) Cats and dogs in the vicinity of the City of Syracuse harbour a bothriocephalus worm which Mueller describes as *Diphyllbothrium mansonoides* n. sp. It has the pointed eggs of the subgenus *Spirometra*. The free edges of the bothria are poorly developed whereas those of *D. mansonii* are flourishing. There is no terminal vestibule to the vagina. The uterus has only two large terminal loops and a sphincter sets off a muscular compartment. The eggs take 50 days to hatch. *Lota* spp. are suspected as the intermediate hosts.

R.T.L.

(36o) Hunninen introduces the concentrated eggs of *Hymenolepis fraterna* into the stomach of anaesthetised mice by means of a 1 cc. syringe. The mice are killed 96 hours later. The first third of the small intestine contains the bulk of the cysticercoids—the heaviest infections occurring between the first and second 10 cm.

R.T.L.

(36p) In 319 patients admitted to Bellevue Hospital, New York, *Ascaris lumbricoides*, *Necator americanus*, *Strongyloides stercoralis* and *Trichuris trichiura* occurred each once in 41 persons who had visited the tropics: *Hymenolepis nana*, *A. lumbricoides* and *T. trichiura* once each in 192 local residents: *Taenia saginata* once in 86 local residents with diarrhoea without obvious cause.

R.T.L.

(36q) Graham has found *Giardia* in the intestine of 6 out of 21 female *Cooperia onchophora* collected from a young bull.

R.T.L.

(36r) In three puppies which died 17 days after infection with *Ancylostoma caninum* the mucosae were perfectly white at autopsy. The blood sucking activity of the worms was so great that the haematopoietic centres could not keep pace with the bleeding. There was very slight reduction in corpuscular volume. Landsberg & Cross support the view of Foster & Landsberg (1934) [see Helm. Abs., Vol. III, No. 114b] that the anaemia of hookworm disease whether chronic or acutely fatal is produced by blood loss.

R.T.L.

(36s) Amongst the adults reared experimentally from *Diphyllbothrium plerocercoids* one showed the double genitalia characteristic of the genus *Diplogonoporus* although the immature segments had single reproductive primordia.

R.T.L.

### 37—Journal of Pathology and Bacteriology.

- a. PASSEY, R. D., LEESE, A. & KNOX, J. C.—“Spiroptera cancer and diet deficiency.” XL (1), 198-199. [1935.]

(37a) Passey, Leese & Knox find that rats fed on white bread or on a diet deficient in vitamin A and infected with cockroaches carrying the larvae of *Gongylonema neoplasticum* show no increased tendency to malignant growths of the stomach as has been suggested by Fibiger.

P.A.C.

## 38—Journal of the Royal Army Medical Corps.

- a. ANON.—“The effect of cooking on the *Cysticercus cellulosae*.” LXIV (2), 92-100. [1935.]
- b. DIXON, H. B. F. & SMITHERS, D. W.—“Cysticercosis (*Taenia solium*).” LXIV (4), 227-234. [1935.]

(38a) Standard army methods of cooking have been shown to kill *Cysticercus cellulosae* in all forms of pork. The largest margin of safety is afforded by baking, roasting and frying since a temperature of 75°C. was reached within the cooking time. R.T.L.

## 39—Journal of the South-Eastern Agricultural College, Wye, Kent.

- a. JARY, S. G. & AUSTIN, M. D.—“Department of Entomology: A survey of the occurrence of the more important pests—potatoes—fruit. Experimental work—experiments on the control of the potato eelworm (*Heterodera schachtii*).” No. 35, pp. 10, 11, 14. [1935.]
- b. McEWEN, A. D.—“Veterinary Department: Sheep diseases—parasitic gastritis and enteritis.” No. 35, 51-54. [1935.]

(39a) Jary & Austin record severe and widespread damage caused by *Heterodera schachtii* in the south eastern district. Experiments for the control of the pest indicate that the use of good seed and suitable manurial treatment improve yield on infected land. *Anguillulina tritici* occurred on wheat in Surrey, *A. dipsaci* caused severe damage to onions and *Aphelenchoides ribes* again caused damage to black currants. M.J.T.

(39b) A drench consisting of copper sulphate and nicotine sulphate in dilute solution was found by McEwen to be effective against the smaller trichostrongyles in sheep. The solution consists of: Copper sulphate 5 gm., nicotine sulphate (40%) 5 c.cm., and distilled or rain water 100 c.cm. The doses recommended, which are within safety limits, are: ewes, 20 to 30 c.cm.; year-old sheep, 20 c.cm.; lambs six to nine months, 10 to 15 c.cm.; lambs three to six months, 7 to 10 c.cm.; and lambs two to three months, 5 to 7 c.cm. The author recommends three doses at intervals of a week or ten days in heavily infected flocks and thereafter at intervals of a month. D.O.M.

## 40—Journal of Tropical Medicine and Hygiene.

- a. FERNANDO, S. E.—“Ocular filariasis. Adult *Wuchereria bancrofti* in the anterior chamber of human eye.” XXXVIII (2), 17-18. [1935.]
- b. MENON, T. B. & ANNAMALAI, D. R.—“Some pathological changes met with in filarial orchitis and their significance.” XXXVIII (2), 18-21. [1935.]
- c. CAWSTON, F. G.—“Elephantiasis in South Africa and Basutoland.” XXXVIII (3), p. 34. [1935.]
- d. GIRGES, R.—“Diagnosis of ascariasis. II.” XXXVIII (5), 55-59. [1935.]
- e. PRESTON, P. G.—“Report of a case of human onchocerciasis in Kenya.” XXXVIII (7), p. 81. [1935.]

(40a) An adult female *Wuchereria bancrofti* was removed from the eye of a native of Kandana, Ceylon. No microfilariae were found in the patient's blood. Filariasis is not endemic in the area in which the patient lived. R.T.L.

(40e) Preston records the first case of onchocerciasis from man in Kenya. R.T.L.



## 41—Journal of the Washington Academy of Sciences.

- a. SKINKER, M. S.—“A new species of *Oochoristica* from a skunk.” xxv (2), 59-65. [1935.]
- b. DIKMANS, G.—“New nematodes of the genus *Longistriata* in rodents.” xxv (2), 72-81. [1935.]
- c. SCHWARTZ, B. & ALICATA, J. E.—“Life history of *Longistriata musculi*, a nematode parasitic in mice.” xxv (3), 128-146. [1935.]

(41a) To the 5 species of *Oochoristica* already reported from carnivores Miss Skinker adds a 6th species, *Oochoristica mephitis*, n. sp. from *Mephitis longata*.

R.T.L.

(41b) Dikmans differentiates the genera *Longistriata* and *Viannaia* and places Price's *Heligmostrongylus hassalli* in the genus *Longistriata*. He gives a key to the genus *Longistriata* and adds descriptions of 4 new species from rodents, viz., *L. musculi*, *L. carolinensis*, *L. dalrymplei* and *L. noviberiae*.

R.T.L.

(41c) The various stages in the life cycle of *Longistriata musculi* as obtained experimentally in mice are described and illustrated. Schwartz & Alicata note a deviation from the usual number of four moults, that the infective larvae enter through the mouth and by the skin but that in the latter event the route through the lungs is exceptional. No extra-intestinal development takes place following skin infection in striking contrast to that observed by Yokogawa in *Nippostrongylus muris*, which is essentially a skin penetrator. Glaring differences were noted in egg production and these are correlated with the portal of entry. The marked stimulation of the defensive mechanism following skin infection is lacking where infection is by the mouth.

R.T.L.

## 42—Lingnan Science Journal.

- a. HU, S. M. K.—“Experimental infection of *Culex fatigans* Weidemann from Foochow, Fookien Province, with *Wuchereria bancrofti* Cobbold.” xiv (1), 87-92. [1935.]
- b. CHEN, H. T.—“A preliminary note on the life history of *Paragonimus* in China.” xiv (1), 143-144. [1935.]
- c. CHEN, H. T.—“On a distome metacercaria from a rat.” xiv (1), 157-158. [1935.]
- d. CHIN, T. G.—“A negative report on the infection of the common snails of Amoy by marine cercaria.” xiv (1), 159-160. [1935.]
- e. OLDT, F.—“Preliminary report on improving the physical condition of pupils in rural schools.” xiv (1), 161-163. [1935.]

(42a) 70% of 193 *Culex fatigans* bred from larvae collected in Foochow were found on dissection to harbour larval stages of *Filaria bancrofti* after experimental feeding. In 68% of the surviving mosquitoes the larvae reached the infective stage. The average infestation was 6.7 worms per mosquito.

R.T.L.

(42b) Unidentified crabs and molluscs infected with larval *Paragonimus* occur in the Pearl River in the neighbourhood of Lingnan University, Canton.

R.T.L.

(42c) Two unidentified distome cercariae are recorded from *Mus norvegicus* and from shrews in Canton.

R.T.L.

## 43—Medizinische Klinik.

- a. SCHULZ-SCHMIDTBORN.—“Das Oleum chenopodii bei der Askariendekur im Kindesalter.” xxxi (2), 47-48. [1935.]

(43a) Schulz-Schmidtborn finds that ascariasis is present in about a quarter of the children among the industrial population of Saarbrücken. In administering chenopodium oil (in castor oil) to many hundreds of cases he has never found it produce toxic symptoms. B.G.P.

## 44—Münchener Medizinische Wochenschrift.

- a. ALTENKAMP, T.—“Akute Appendizitis bei Bandwurm.” lxxxii (11), 418-419. [1935.]

## 45—New Orleans Medical and Surgical Journal.

- a. LEATHERS, W. S. & KELLER, A. E.—“An analysis of the hookworm problem in Mississippi.” lxxxvii (7), 425-433. [1935.]

## 46—New Zealand Journal of Agriculture.

- a. McILWAINE, J. E.—“Hydatid disease.” L (2), 78-80. [1935.]  
 b. McILWAINE, J. E.—“The eradication of some parasites affecting stock.” L (3), 160-163. [1935.]

## 47—Norsk Magasin for Laegevidenskapen.

- a. VOSS, J. A.—“Et tilfelle av filariose.” xcvi (1), 17-21. [1935.]

(47a) [A case of filariasis.]

## 48—Norsk Veterinaertidsskrift.

- a. ØKLAND, F.—“Om utbredelse og hyppighet av den lille leverikte (*Dicrocoelium lanceatum* Stiles & Hassall) i Norge.” XLVII, pp. 22-26, 96-100, 162-166. [1935.]

(48a) *Helicella ericetorum* implicated by Cameron as intermediate host of *Dicrocoelium* does not occur in many regions of Scandinavia where the fluke prevails. Økland believes that there is an unknown intermediary there. R.T.L.

## 49—North American Veterinarian.

- a. ANON.—“Hexylresorcinol as an anthelmintic.” xvi (1), 38-39. [1935.]  
 b. ANON.—“Calcification acceleration of *Trichina* cysts.” xvi (3), 24-25. [1935.]  
 c. UNDERWOOD, P. C.—“The use of saturated sodium chloride solution as a larvicide in the control of the dog hookworm, *Ancylostoma caninum*.” xvi (3), 41-44. [1935.]

(49c) The sprinkling of a saturated solution of sodium chloride in runs where dogs are kept has proved entirely satisfactory in protecting dogs from infestation with *Ancylostoma caninum*. R.T.L.



## 50—Nuova Veterinaria.

- a. VITALE, A.—“*Gigantorhynchus moniliformis* nelle faraone della Colonia Eritrea.” XIII (4), 5-8. [1935.]

(50a) Vitale reports an outbreak of disease, characterized by dermatitis and loss of feathers, among 250 guinea fowl captured in Eritrea. The disease appeared to be due to heavy helminthic infestations in the intestine where he found *Choanotaenia infundibuliformis*, *Heterakis perspicillum* and *Gigantorhynchus moniliformis*—the latter apparently for the first time in birds.  
B.G.P.

## 51—Okayama-Igakkai-Zasshi.

- a. UYENO, H.—“Über den Zucker- und Fettstoffwechsel und die passive Anaphylaxie bei experimenteller Kaninchenclonorchiasis. I Mitteilung. Experimentelle Untersuchung über den Zuckerstoffwechsel bei der Kaninchenclonorchiasis.” XLVII (3), 673-691. [In Japanese: German summary pp. 673-674.] [1935.]

(51a) Uyeno found that light infections of clonorchiasis in rabbits did not affect the blood sugar level. Heavy infections caused hyperglycaemia, which in some cases was preceded by a temporary hypoglycaemia. Sugar tolerance experiments were carried out on heavily infected rabbits, glucose, fructose and galactose being given intravenously. The increased hyperglycaemia which resulted was of long duration. With the cases given glucose or galactose, the amount of sugar excreted into the urine was decreased, with those given fructose it was increased.  
R.H.H.

## 52—Parasitology.

- a. KRULL, W. H.—“Studies on the life history of *Panopistus pricei* Sinitsin, 1931 (Trematoda).” XXVII (1), 93-100. [1935.]

(52a) Krull describes the sporocyst cercaria and metacercaria of *Panopistus pricei* from the shrew *Blarina brevicauda*. These stages were obtained from *Zonitoides arboreus* by experimental infection. Sinitsin's assumption that a metacercaria obtained from the pericardium of *Gastrodonta suppressa* belongs to *P. pricei* is rejected.  
R.H.L.

## 53—Pediatria y Puericultura.

- a. LÓPEZ-NEYRA, C. R. & GALDÓ, A.—“Terapéutica de las helmintiasis intestinales en la infancia. (Nota segunda). Tratamiento de la Enterobiosis (Oxiuriasis).” January [Reprint 7 pp.] [1935.]

(53a) López-Neyra & Galdó discuss suitable anthelmintic and prophylactic measures against oxyuris in children. They take for granted the possibility of an internal life cycle, eggs laid in the intestinal mucosa are assumed to hatch *in situ* and the emerging larva to regain the intestinal lumen, there to become adult without having left the intestine at any stage.  
B.G.P.

## 54—Phytopathology.

- a. CHRISTIE, J. R.—“The development of root-knot nematode galls.” [Abstract of paper presented at the 26th Annual Meeting of the American Phytopathological Society.] xxv (1), 10-11. [1935.]
- b. NEWHALL, A. G.—“A study of electric soil sterilization.” [Abstract of paper presented at the 26th Annual Meeting of the American Phytopathological Society.] xxv (1), 29-30. [1935.]
- c. GODFREY, G. H.—“Experiments on the control of the root-knot nematode in the field with chloropicrin and other chemicals.” xxv (1), 67-90. [1935.]

(54a) Christie describes the development of galls produced by *Heterodera marioni* in tomato roots.

The larva enters near the root tip and takes up its position with the head in the plerome, the body extending into the periblem. After 3 or 4 days the cell walls of the central cylinder near the head of the worm break down and “giant cells” result. Tangential division in the pericycle produces a layer of small, thin-walled parenchymatous cells, not present in normal roots, and small xylem elements are differentiated from the innermost parenchymatous cells. These changes are induced by a secretion from the oesophageal glands of the nematode. M.J.T.

(54b) Newhall compared two types of box sterilizers, the indirect, heating element, and the direct, resistance types.

The optimum initial soil moisture was two-thirds of its water-holding capacity. Time taken to raise the soil to 70°C. varied from 30 minutes to 6 hours. *Heterodera marioni* and other organisms were destroyed in various lengths of time by raising the soil temperature to 71°C. or less. Ordinary soil-heating cable was not adequate for sterilization purposes. M.J.T.

(54c) Godfrey describes the results of field experiments with chloropicrin, carbon bisulphide, cyanogas and potassium xanthate.

The chemicals were inserted into prepared beds which were covered with tar-impregnated pineapple mulching paper. Chloropicrin applied at the rate of 97 lbs. per acre gave a 14% yield increase; 130 lbs. per acre gave 26% increase with 94.5% reduction in nematodes; 160 lbs. per acre gave 31.4% increase with 94.4% nematode reduction. In a second experiment with more efficient gas confinement chloropicrin applied at 150 lbs. per acre gave a yield increase of 52.2% with nematode reduction of 83%; at the rate of 170 lbs. per acre chloropicrin gave an increased yield of 52.3% with 90% nematode reduction. Carbon bisulphide at 750 lbs. per acre gave a yield increase of 29.3% with 48% nematode reduction. M.J.T.

## 55—Proceedings of the Helminthological Society of Washington.

- a. COBB, N. A.—“A key to the genera of free-living nemas.” II (1), 1-40. [1935.]
- b. STEINER, G.—“Opuscula miscellanea nematologica, I.” II (1), 41-45. [1935.]
- c. THORNE, G. & PRICE, C.—“The nematode *Neotylenchus abulbosus* Steiner (Anguillulidae) as a parasite of sugar-beets.” II (1), p. 46. [1935.]
- d. THORNE, G.—“Notes on free-living and plant-parasitic nematodes, I.” II (1), 46-47. [1935.]
- e. TAYLOR, A. L.—“A review of the fossil nematodes.” II (1), 47-49. [1935.]



- f. CHITWOOD, B. G.—“A new nematode, *Camacolaimus prytherchi*, n. sp. (Camacolaimidae).” II (1), 49-50. [1935.]
- g. CHITWOOD, M. B.—“Two new nematodes of the genus *Heth* Cobb, 1898 (Atractidae).” II (1), 50-51. [1935.]
- h. CHITWOOD, B. G.—“Nomenclatorial notes, I.” II (1), 51-54. [1935.]
- i. LUCKER, J. T.—“Survival of horse strongyle eggs under anerobic conditions.” II (1), 54-55. [1935.]
- j. WRIGHT, W. H.—“Observations on the life history of *Toxascaris leonina* (Nematoda: Ascaridae).” II (1), p. 56. [1935.]
- k. DIKMANS, G.—“A note on the identity of *Nematodirus tarandi* Hadwen, 1922, and *Nematodirus skrjabini* Mitzkewitsch, 1929 (Nematoda: Trichostrongylidae).” II (1), p. 56. [1935.]
- l. DIKMANS, G. & WEHR, E. E.—“An unidentified nematode from the eye of the moose, *Alces americana*.” II (1), p. 57. [1935.]
- m. DIKMANS, G.—“Nematode parasites of the Saiga antelope *Saiga tatarica*.” II (1), p. 57. [1935.]
- n. DIKMANS, G.—“A note on *Nematodirella* (Nematoda: Trichostrongylidae) from three different hosts.” II (1), 58-59. [1935.]
- o. DIKMANS, G.—“Lungworms collected from deer, *Odocoileus virginianus*, in Michigan.” II (1), p. 59. [1935.]
- p. CRAM, E. B.—“New avian and insect hosts for *Gongylonema ingluvicola* (Nematoda: Spiruridae).” II (1), p. 59. [1935.]
- q. MCINTOSH, A. & MCINTOSH, G. E.—“Additional notes on two bat parasites, *Dicrocoelium lasiuri* McIntosh, 1933 (Trematoda: Dicrocoeliidae) and *Litomosa americana* McIntosh, 1932 (Nematoda: Filariidae).” II (1), 60-62. [1935.]
- r. PRICE, E. W. & MCINTOSH, A.—“A new trematode, *Lyperosomum monenteron*, n. sp. (Dicrocoeliidae), from a robin.” II (1), 63-64. [1935.]
- s. HOFFMAN, W. A.—“*Mesocoelium danforthi*, n. sp. (Dicrocoeliidae), from a lizard, *Celestus pleii*, in Puerto Rico.” II (1), p. 64. [1935.]
- t. KRULL, W. H.—“A note on the life history of *Telorchis robustus* Goldb. (Trematoda: Telorchidae).” II (1), p. 65. [1935.]

(55a) M. V. Cobb & C. Cooper have prepared for the press a key to the genera of free-living nematodes which was used as a card index by the late N. A. Cobb. It occupies 28 pages of small type, set solid, and is followed by an extensive bibliography and index. B.G.P.

(55b) Steiner describes and figures *Anguillulina gallica* n. sp. from elm burls, *Acrobeles glaphyrus* n. sp. (single female) from a diseased tuber of *Polyanthes tuberosa*, and *Cephalobus maximus* (Thorne) with a first description of the male, and confirms Goodey's opinion that *Anguillulina cancellata* (Cobb) is a synonym of *A. costata* (De Man). B.G.P.

(55d) Thorne presents three notes: (i) *Diphtherophora perplexans* suddenly appeared in numbers in Utah after not having been found there during 10 years of observation; (ii) copper sulphate 1:500,000 used in a stream for snail control had no visible effect on the nematodes present; (iii) *Tylenchorhynchus cylindricus* (Cobb) is a synonym of *Anguillulina dubia* (Bütschli). B.G.P.

(55e) Taylor calls attention to three papers on fossil nematodes. He proposes *Heydonius* as a collective genus for *Mermis antiqua* Heydon, 1862, from the Rhine lignite (Eocene) and for other fossil mermithids. He also proposes *Oligoplectes* for *Anguillula succini* Duisburg, 1862, from amber and for other fossil Plectidae. *Vetus duisburgi* n. g., n. sp. is erected for two other specimens included in *A. succini*, the genus *Vetus* being available for fossil nematodes of uncertain family. Menge's (1866) *Mermis matutina* is transferred to *Heydonius* and his *Anguillula pristina* and *A. capillacea* both to *Vetus*. B.G.P.

(55g) Chitwood describes and figures two nematodes from millipedes : *Heth dimorphum* n. sp. from *Spirostreptus* sp. and *H. hexaspinosum* n. sp. from *Spirobolus* sp. ; and gives a key to the species of *Heth*. B.G.P.

(55h) Chitwood presents 4 nomenclatorial notes : (i) It is claimed that *Anguina* Scopoli, 1777 is valid for *Anguillulina* (= *Tylenchus*), and the relevant passages of Scopoli, 1777 and of Linnaeus, 1767 are quoted in typographical facsimile. It is suggested that *Tylenchus* should be recognized on grounds of wide usage. (ii) Since *Asconema* Leuckart and *Atractonema* Leuckart (= *Asconema* renamed) are homonyms, *Tripius* n. g. is proposed with *T. gibbosus* as type. Similarly, for Dujardin's homonyms *Leptodera* and *Leptoderes* (= *Leptodera* renamed), *Agfa* n. g. is proposed with *A. flexilis* as type. (iii) Chitwood lists emended spellings for 11 family and subfamily names. (iv) Types are designated for 18 genera. B.G.P.

(55i) Lucker has kept horse strongyle eggs submerged in dilute faeces and water for variable times up to 63 days. The eggs fail to develop under these conditions but, on removal, a proportion develop and hatch, depending on the time of submergence. Thus 75% hatch after 31 days but only 0.016% after 63 days. Stable manure is stored for 4 to 6 weeks in liquid form by some European farmers. B.G.P.

(55j) Wright finds that only exceptionally, as in very heavy infestations, do *Toxascaris leonina* larvae migrate via liver and lungs. The infective (2nd-stage) larvae which hatch normally spend 9 or 10 days in the Lieberkühn crypts of the lower duodenum after which the 3rd-stage larvae emerge. B.G.P.

(55l) Dikmans & Wehr consider that 2 immature female nematodes from the eye of *Alces americana* possibly belong to the genus *Elaphostrongylus*, which is a connective-tissue parasite. B.G.P.

(55n) On the basis of measurement data Dikmans distinguishes 3 sub-species (*nomina nova*) of *Nematodirella longispiculata*, as follows : *N. l. longispiculata* from *Rangifer tarandus*, *N. l. alcidis* from *Alces americana*, and *N. l. antilocaprae* from *Antilocapra americana*. B.G.P.

(55p) Cram infected *Blattella germanica* with embryonated eggs of *Gongylonema ingluvicola* from *Oreortyx picta*. B.G.P.

(55q) *Dicrocoelium lasiuri* and *Litomosa americana* from bats, previously reported only in abstract form, are here described and figured by McIntosh & McIntosh. They give a key to the 4 species of *Litomosa*. B.G.P.

(55t) Krull finds that eggs of *Telorchis robustus*, adult in *Terrapene carolina*, when fed to *Pseudosuccinea columella*, produce xiphidiocercariae which will subsequently encyst in the same species of mollusc or in *Helisoma trivolvis*, or *Lymnaea traskii*. B.G.P.

## 56—Proceedings of the Indian Academy of Sciences.

a. PATWARDHAN, S. S.—“ Nematodes from the common wall lizard *Hemidactylus flavoviridis* (Ruppel).” I (7), 376-380. [1935.]

(56a) In the Indian *Hemidactylus flavoviridis* a new species *Thelandros hemidactylus* n. sp. is described with a species of *Thubunaea*, *T. asymmetrica* previously known only in Uganda. R.T.L.



## 57—Proceedings of the Royal Society of Medicine.

- a. LOCKART-MUMMERY, P.—“Hydatid cyst of the rectum.” XXVIII (3), 214-215. [1935.]

## 58—Queensland Agricultural Journal.

- a. LEWCOCK, H. K.—“Pineapple wilt disease and its control.” XLIII (1), 9-17. [1935.]  
 b. ROBERTS, F. H. S.—“Parasites of the dog and cat.” XLIII (1), 18-35. [1935.]  
 c. VEITCH, R.—“Root knot nematode and its control.” XLIII (3), 242-244. [1935.]

(58a) Lewcock describes the various types of pineapple wilt occurring in Queensland and discusses their incidence, contributory conditions and measures which may be taken to reduce the likelihood of the disease occurring. Soil reaction should be kept acid by the application of dung, sulphate of ammonia or powdered sulphur. Organic matter should be conserved and where necessary introduced by the cultivation as green manure of nematode-resistant legumes. Land should be well drained and surface erosion reduced as far as possible. Most especially on new land care should be taken to plant only healthy stock. M.J.T.

(58c) Veitch gives a general description of the appearance of plants infected with *Heterodera marioni*, the life cycle of the parasite and methods for its control.

The importance of transplanting only clean seedling stock into land which is free from infection is emphasized and the methods of reducing infection in seed beds by steam sterilization, rotation with immune crops and destruction of plant refuse are briefly dealt with. M.J.T.

## 59—Revue Suisse de Zoologie.

- a. DUBOIS, G.—“Contribution à l'étude de quelques parasites de l'ordre des Strigeatoidea.” XLII (1), 1-19. [1935.]  
 b. JOYEUX, C. & BAER, J. G.—“Cestodes d'Indochine.” XLII (2), 249-273. [1935.]  
 c. BAER, J. G.—“Étude de quelques helminthes de Lémuriens.” XLII (2), 275-291. [1935.]

(59a) Dubois gives a new generic diagnosis for *Crocodylicola* (Alariidae) and redescribes *C. brevis*, *C. cinosterni* and *C. pseudostoma* which he differentiates in tabular form. He also redescribes *Neodiplostomum minimum* and *Strigea infundibuliformis* differentiating the latter from *S. strigis*. B.G.P.

(59b) Joyeux & Baer describe the cestodes collected from birds in Indochina by Houdemer and also by the Kelly-Roosevelt expedition. The new species included are: *Raillietina* (R.) *vivieni* in *Coturnix japonica*, *R. (Skrjabinia) crepidocotyle* in *Garrulax chinensis*, *Dilepis lebasquei* in *Francolinus pintadeanus*, *Choanotaenia sinensis* in *Psarisomius dalhousiae*, *Anonchotaenia sbesteriometra* in *Motacilla cinerea* (with a differentiation of species of *Anonchotaenia*), *Hymenolepis francolini* in *Francolinus pintadeanus*, *H. streptopeliae* in *Streptopelia orientalis*, and *H. tonkinensis* in *Surniculus lugubris*. B.G.P.

(59c) Baer describes *Raillietina* (s. l.) *röthlisbergeri* n. sp. from *Nycticebus tardigradus hilleri*, *Enterobius lemuris* n. sp. from *Lemur albifrons*, *Subulura prosimiae* n. sp. from *Lemur fulvus* and *Oxyspirura conjunctivialis* (Linstow, 1907). The last named is the first species from the eye of mammals to fall into the genus *Oxyspirura* sens. lat. R.T.L.

#### 60—Revue de Zoologie et de Botanique Africaines.

- a. CONINCK, L. A. DE.—“Contribution à la connaissance des nématodes libres du Congo Belge. I. Les nématodes libres des marais de la Nyamuamba (Ruwenzori) et des sources chaudes du Mont Banze (Lac Kivu).” xxvi (2), 211-232; (3), 249-326. [1935.]

(60a) De Coninck describes several free-living nematodes collected from two localities in the Belgian Congo. Eight species, including *Dorylaimus juvenilis* n. sp., are represented amongst 374 individuals obtained from a thermal spring, flowing into Lake Kivu, near Kakondo at the foot of Mt. Banze. From the marshes of the Nyamuamba (Ruwenzori) 652 individuals were obtained representing 21 species of which the following 7 are new to science: *Actinolaimus ruwenzorii*, *Aphanolaimus microlaimus*, *Bastiania parexilis*, *Dorylaimus paracentrocercus*, *D. parafecundus*, *D. ruwenzorii* and *Rhabditis incisocaudatus*. The author discusses the nematode fauna of thermal waters in relation to the forms he describes and includes several remarks on the systematics of free-living forms. J.N.O.

#### 61—Scientific Horticulture.

- a. OGILVIE, L. & MULLIGAN, B. O.—“Vegetable diseases: a survey of recent work at Long Ashton.” III, 119-125. [1935.]  
b. HODSON, W. E. H.—“Control of insect pests of bulbs: a survey of recent work.” III, 192-196. [1935.]

(61a) Ogilvie & Mulligan give a brief account of researches on “pea sickness” due to *Heterodera schachtii*.

Broad bean, vetches and red clover are also attacked by this strain of the nematode. Some varieties of pea are slightly resistant to attack. Sulphate of ammonia, sulphate of potash and dung had no apparent remedial effect but calcium cyanamide gave highly beneficial results. Three years rotation with immune crops was insufficient to rid the soil of infection and long periods of rotation are suggested as a control measure. M.J.T.

(61b) Hodson describes symptoms of eelworm infection in narcissus and iris and summarizes methods of control applicable to *Anguillulina dipsaci* in bulbs.

Hot water treatment is effective in destroying infection within the bulb and rotation which starves the eelworm is the only practicable method of cleaning infested land. Three years rotation with immune crops is sufficient to clean infested land provided that weeds are not allowed to carry on the infection. M.J.T.

#### 62—Scottish Journal of Agriculture.

- a. ROBERTSON, D.—“The stem eelworm disease of oats and its control.” xviii (1), 47-52. [1935.]



(62a) In this non-technical paper Robertson deals with several practical aspects of the disease of oats caused by the stem eelworm, *Anguillulina dipsaci*.

He discusses its economic importance and shows that on some Scottish farms infestation is becoming so bad as to render the growing of oats unprofitable. Too frequent cropping with oats predisposes to the disease. Symptoms are given, the parasite and its life-history are briefly described and various other biological facts concerning it are dealt with, such as, life in the soil, numbers of the parasite in the soil and the effect of frost and heat. Finally methods of control are discussed and it is shown that the only reliable and economic method is to adopt a system of crop rotation with the lapse of 4 or preferably 6 years between successive sowings of oats.

T.G.

### 63—Semana Médica.

- a. ARENAS, N.—“Quiste hidático primitivo y solitario del gran epiplón, simulando un quiste del ovario.” XLII (5), 327-330. [1935.]

### 64—South African Medical Journal.

- a. ELLIOTT, C. C.—“Hydatid cysts of femur.” IX (1), p. 17. [1935.]

### 65—Taiwan Igakkai Zasshi.

- a. MAEOZOKO, T.—“Clinical observations on men harboured with *Hymenolepis nana*.” XXXIV (1), 50. [1935.]
- b. KO-GYOKUKAI.—“Ein Fall von Otitis media acuta verursacht durch einem lebendigen Spulwurm.” XXXIV (3), 363. [1935.]

### 66—Tierärztliche Rundschau.

- a. KORKHAUS, R.—“Zur Kenntnis der Vogelparasiten. Untersuchungen über den Befall von Zugkrähen, insbesondere über die im Krähenkot ausgeschiedenen Parasiteneier.” XLI (2), 17-21; (3), 38-40. [1935.]

(66a) Since wild birds are of some importance in conveying helminthic infections to poultry, Korkhaus here gives an illustrated description of helminth eggs found in the faeces or urine of some of the 334 hooded crows (*Corvus cornix*) and 4 rooks (*C. frugilegus*) which were caught and examined in East Prussia. The first part contains descriptions and figures for the eggs of *Acuaria anthuris*, *Syngamus trachea*, *Porrocaecum semiteres*, *Capillaria contorta* and *Mediorhynchus micracanthus*; the second deals with those of 7 species of trematodes from 7 genera, the eggs being figured in a plate.

B.G.P.

### 67—Tijdschrift voor Diergeneeskunde.

- a. BURGGRAAF, H.—“Pancreas-distomatose.” LXII (8), 399-407. [1935.]

### 68—Transactions of the American Microscopical Society.

- a. WILLEY, C. H.—“Studies on the morphology and systematic position of the trematode *Procladorchis pangasii* n.g. (*Cladorchis pangasii* MacCullum, 1905).” LIV (1), 8-14. [1935.]
- b. WEST, R. M.—“The cercaria of *Neodiplostomum lucidum* LaRue and Bosma.” LIV (1), 15-18. [1935.]

- c. INGLES, L. G.—“Notes on the development of a heterophyid trematode.” LIV (1), 19-21. [1935.]
- d. DOBROVOLNY, C. G. & DOBROVOLNY, M. P.—“Polyradiate tapeworms from a dog.” LIV (1), 22-27. [1935.]
- e. MCINTOSH, A.—“A new hookworm, *Monodontus floridanus* n. sp., from a cotton rat, *Sigmodon hispidus*.” LIV (1), 28-32. [1935.]
- f. CHANDLER, A. C.—“A new genus and species of Subulurinae (Nematodes).” LIV (1), 33-35. [1935.]
- g. VAZ, Z. & PEREIRA, C.—“Some new Brazilian nematodes.” LIV (1), 36-40. [1935.]

(68a) A new genus *Protocladorchis* is created for *Cladorchis pangasii*, described by MacCallum from Sumatran fishes. MacCallum's description of the lymph and excretory systems is corrected. R.T.L.

(68b) The strigeid pharyngeal longifurcate cercaria of *Neodiplostomum lucidum* LaRue & Bosma (1927) is illustrated and described. It is markedly similar to *C. marcianae* LaRue and to the cercaria of *Alaria mustelae* Bosma. West differentiates it from both. R.T.L.

(68c) Ingles describes a cercaria from *Goniobasis nigrina* (Lea). It is the larva of a species of *Metagonimoides* Price, 1931. This cercaria has structures adapted for a free swimming life which it does not attain. In its metamorphosis into an adolecscaria it undergoes a remarkable transformation. R.T.L.

(68d) Out of 294 specimens of *Taenia pisiformis*, 13 were triradiate and one tetraradiate. The tetraradiate specimen was completely double throughout with eight suckers. One of the triradiate forms had two complete rostellum; all had six suckers. R.T.L.

(68e) The genus *Monodontus* is restricted to six species of which *M. floridanus* from the cotton rat *Sigmodon hispidus* is described as new. It resembles very closely *M. rarus* from *Mesomys guirara*. R.T.L.

(68f) A new genus of Subulurinae is described from the blue or scaled quail *Callipepla squamata* under the name *Aulonocephalus* with *A. lindquisti* n. sp., t. sp. R.T.L.

(68g) Three new Brazilian nematodes are named and described, viz., *Physaloptera bispiculata* from the wild rat *Nectomys squamipes*, *Macdonaldius carinii* from *Elapomorphus tricolor* and *Hadjelia curvata* from *Nothura maculosa*. R.T.L.

## 69—Transactions of the Royal Society of Tropical Medicine and Hygiene.

- a. RAMSAY, G. W. St. C.—“Observations on an intradermal test for dracunculiasis.” xxviii (4), 399-404. [1935.]
- b. ADAMS, A. R. D.—“Ascariasis of the liver. Report of case.” xxviii (4), 419-420. [1935.]
- c. BRYANT, J.—“Endemic retino-choroiditis in the Anglo-Egyptian Sudan and its possible relationship to *Onchocerca volvulus*.” xxviii (5), 523-532. [1935.]
- d. ROMITI, C.—“Filariasis in British Guiana. A comparative study of *Filaria bancrofti* and *Filaria ozzardi* infections.” xxviii (6), 613-626. [1935.]
- e. FAUST, E. C.—“Notes on helminths from Panama. III. Filarial infection in the marmosets, *Leontocebus geoffroyi* (Pucheran) and *Saimiri orstedii* (Reinhardt) in Panama.” xxviii (6), 627-634. [1935.]

(69a) Ramsay describes a method of preparing from dried guinea worm an antigen which gave a positive reaction as an intradermal test in 35 out of 41 patients. R.T.L.

(69c) Blindness, night-blindness and defective vision are appallingly common in the Bahr-el-Ghazal Province of the Sudan. The bulk of the cases show a gross form of retino-choroiditis associated with optic atrophy. The author believes that *O. volvulus* is the cause of Sudan blindness. Its distribution is along the banks of rocky streams and is identical with that of *Onchocerca volvulus*, the occurrence of which is recorded for the first time from the Sudan. R.T.L.

(69e) From two marmosets Faust describes *Tetrapetalonema marmosetae* n. g., n. sp. This new genus belongs to the Setariinae. It has a rectangular peribuccal plate with twinned papillae at each corner. The female tail has two pairs of fleshy lateral lappets while the male has a single minute pair. The embryos are sheathless. The new species may be Molin's *Filaria intercostalis*. R.T.L.

## 70—Veterinary Record.

- a. PILLERS, A. W. N.—“Some remarks on the clinical aspect of chronic tracheo-bronchitis of the dog due to *Oslerus osleri* (Cobbold, 1879).” xv (3), 62-63. [1935.]
- b. TAYLOR, E. L.—“The veterinary aspect of parasitology.” xv (5), 103-114. [1935.]
- c. WATSON, A. H.—“Clinical notes. Case 5. Verminous obstruction of the equine duodenum.” xv (11), 326-327. [1935.]
- d. BECKETT, F.—“Some pig diseases.” xv (15), 415-421. [1935.]

(70a) Pillers adds three more cases to the existing records of dogs infected with *Oslerus osleri*.

In one of these cases a definite diagnosis was made by endoscopic methods and portions of worm nodules removed by means of a bronchoscopic forceps. That the worms have a short life was indicated by the complete disappearance of the nodules after a period of about 5 months. The author suggests, as a line of treatment, that infected animals should be rested for 3 or 4 months in clean, insect-free loose boxes so as to prevent reinfection. D.O.M.

(70b) Taylor points out that researches on helminths have been chiefly concerned with their morphology, life-history and classification and that too little attention has been paid to the disease caused by the parasites.

Biology has laid a sound foundation of pure scientific knowledge and it now remains for the veterinarian to apply this knowledge in his studies on the prevention and treatment of parasitic disease.

In outlining the various fields of study which might be regarded as the special concern of the veterinary parasitologist, the author mentions some of the more recent researches on the pathology, diagnosis, immunology, epidemiology and treatment of parasitic disease. D.O.M.

## 71—Wiener Klinische Wochenschrift.

- a. NEUBER, E.—“Ueber den Heilwert und Wirkungsmechanismus der Goldpräparate, mit besonderer Rücksicht auf einige chronische Infektionskrankheiten (Sklerom, Aktinomykose, Filariase).” XLVIII (16), 486-490. [1935.]



(71a) Neuber points out that the therapeutic dose of inorganic gold compounds lies dangerously near the toxic level, but that this does not apply to organic compounds like Solganol and Solganol B. He recommends the latter, which is water-soluble, in doses of 0.01 gm. increasing to a maximum of 0.3 to 0.5 gm. In two cases of *Filaria bancrofti* this drug alleviated both local symptoms and fever, but did not effect a cure. Combined with malaria, however, a complete cure resulted in one case. [No details of this cure are presented.] B.G.P.

## 72—Zeitschrift für Fleisch- und Milchhygiene.

- a. ZUNKER, M.—“Die Abtötung der Rinderfinnen durch Kühl- und Gefrierverfahren.” XLV (7), 121-126. [1935.]
- b. KELLER, H.—“Über eine Modifikation des Iwanizkyschen Verfahrens zur Prüfung der Übertragungsfähigkeit gesundheitsschädlicher Finnen am Menschen.” XLV (7), 126-129. [1935.]
- c. OSTERTAG, R. v.—“Die Stellung des Tierarztes in der öffentlichen Gesundheitspflege.” XLV (8), 141-146. [1935.]
- d. TRAWIŃSKI, A.—“Neue Diagnosemethode der Tichinose.” XLV (9), 166-168. [1935.]
- e. FUNCK, E.—“Über gesundheitsschädliche Finnen im Schlunde des Rindes.” XLV (10), p. 182. [1935.]
- f. JUNACK, M.—“Zu den Ausführungen von Hemmann über hochgradige Echinokokkeninvasion beim Rinde.” XLV (10), 184-185. [1935.]
- g. IBSCHER, K.—“Bemerkenswerte Fleischbeschaubefunde. I. Echinokokken beim Pferde.” XLV (10), 187-188. [1935.]
- h. FUNCK, E.—“Zum Vorkommen der Rinderfinne in den Muskeln der Lippen, Backe und Nase.” XLV (14), 261-262. [1935.]

(72a) Zunker states that, in Germany, the meat inspection law in relation to cysticerci has insisted on a 3-weeks chilling of infested carcasses, on the assumption that all cysticerci die in 3 weeks, irrespective of temperature. This is now known not to be true, and freezing until the temperature in all parts of the carcass is at most  $-3^{\circ}\text{C}$ . is now desirable. The time required for this varies, according to carcass weight, up to a maximum of 7 days. B.G.P.

(72b) Keller finds that Iwanizky's method of testing the viability of cysticerci [see Helm. Abs., Vol. II, No. 208a] is unsatisfactory since they are subjected in the colon to sufficient pressure to crush them. He therefore encloses them first in open-ended celluloid tubes. B.G.P.

(72d) Trawiński urges the adoption of the precipitin test for the diagnosis of *Trichinella spiralis* infections in pigs at the time of slaughter. Anomalous results obtained by other workers with this test, particularly in the U.S.A., are due, he says, to the use of Coca's solution in preparing the antigen. He gives details of his own method of making it from dried larvae previously freed from particles of muscle by digestion with pepsin and HCl. B.G.P.

(72f) Junack, referring to a paper by Hemmann on heavy hydatid infection in an ox [see Helm. Abs., Vol. III, No. 272f], states that massive infections involving organs, lymph glands and bones are not uncommon in his experience. Differentiation from tuberculosis is based on the laminated hydatid cuticle. B.G.P.

### 73—Zeitschrift für Immunitätsforschung und Experimentelle Therapie.

- a. SIEVERS, O.—“Serologische Untersuchungen über Bandwurmantigene und ihre Antikörper.” LXXXIV (2/3), 208-224. [1935.]
- b. WAGNER, O.—“Hautallergie und Komplementbindungsreaktion bei Trematodeninfektionen.” LXXXIV (2/3), 225-236. [1935.]

(73a) Sievers has obtained antisera which react with extracts of *Dibothriocephalus latus*, *Taenia saginata* and *Echinococcus* by immunization with *D. latus* and *T. saginata* protein. He has not been able to detect antibodies or cestode antigens in the serum of carriers of *D. latus*. P.A.C.

(73b) By combining cutaneous anaphylaxis and complement fixation reaction in sheep carrying *Fasciola hepatica*, Wagner was able to obtain positive diagnosis in 90% of cases. He suggests that diagnosis is, however, easier and more certain from faecal examinations as other trematodes, particularly *Dicrocoelium*, react positively to *Fasciola* extract. P.A.C.

### 74—Zeitschrift für Infektionskrankheiten, Parasitäre Krankheiten und Hygiene der Haustiere.

- a. ALMARZA, N.—“Die Leberegel des Schafes.” XLVII (3), 195-202. [1935.]
- b. MICHAILOFF, W. W.—“Ueber Arterienfilariosis bei Rindern im städtischen Schlachthaus zu Schanghai.” XLVII (3), 215-220. [1935.]

(74a) Almarza gives brief descriptions of the following liver flukes found by him in sheep in Spain: *Fasciola hepatica*, *F. gigantica*, *F. magna*, *Dicrocoelium dendriticum*, and 3 unknown species of *Platynosomum* which he designates I, II and III. The family Fasciolidae is described as having a uterine rosette between the testes[!]. Photographs of the *Platynosomum* species are given [showing a *Dicrocoelium*-like arrangement of the testes and other organs]. B.G.P.

(74b) Michailoff reports the infestation of about 85% of 2,821 cattle slaughtered at Shanghai with a filarial worm forming nodules in the aorta and occasionally on the left ventricular valve of the heart. The nodules varied in size (the average being 1 cm. diameter and the maximum the size of a walnut) and in number (from 1 to 20) in each animal: some showed calcification. None were present in the vena cava. Infections in calves were not found before the fly-season, i.e., until the end of June. The worm is thought to belong to the Onchocercinae, possibly to the genus “*Armilbatae*” [*Onchocerca armillata*?]: an illustrated description is promised later. B.G.P.

### 75—Zeitschrift für Parasitenkunde.

- a. SCHEER, D.—“Die Jugendform des acanthocephalen *Echinorhynchus truttae* Schrank und ihr Vorkommen in *Gammarus pulex*.” VII (4), 440-442. [1935.]
- b. YAMAGUTI, S.—“*Plagiorchis maculosus* (Rud., 1802) aus der japanischen Schwalbe, *Hirundo rustica gutturalis* (Scopoli).” VII (4), 513-514. [1935.]
- c. EKBAUM, E.—“Über eine neue *Cystidicola* in der Schwimmblase von *Oncorhynchus kisutch* Walbaum.” VII (4), p. 515. [1935.]

(75c) Ekbaum describes *Cystidicola walkeri* n. sp. from the swim-bladder of 5 out of 63 three-year-old *Oncorhynchus kisutch* taken in the Pacific. A fuller description is promised later. B.G.P.



## 76—Zentralblatt für Bakteriologie. Abteilung I. Originale.

- a. SZIDAT, U.—“Weitere Beiträge zur Kenntnis der Trematoden der Monostomidengattung *Notocotylus* Diesing.” CXXXIII (3/4), 265-270. [1935.]

(76a) The adults of *Cercaria imbricata* have been obtained by Szidat by feeding to chickens and ducks. The new species *Notocotylus imbricata* is differentiated from *N. attenuatus* Rud. R.T.L.

## 77—Zoologischer Anzeiger.

- a. GOFFART, H.—“*Rhabditis gracilis* n. sp. (Rhabditidae, Nematoda) als Bewohner faulender Kakaofrüchte.” CIX (5/6), 134-138. [1935.]
- b. CHATTERJI, R. C.—“Permanent mounts of nematodes.” CIX (9/10), p. 270. [1935.]
- c. PINTNER, T.—“Berichtigung.” CIX (9/10), 271-272. [1935.]
- d. SCHULZ, E.—“Marine Nematoden von Sizilien und Gran Canaria.” CIX (11/12), 299-304. [1935.]
- e. STAMMER, H. J.—“*Desmoscolex aquadulcis* n. sp., der erste süßwasserbewohnende *Desmoscolex* aus einer slowenischen Höhle (Nemat.)” CIX (11/12), 311-318. [1935.]

(77a) In decaying Cacao fruits, attacked by *Phytophthora*, brought back from the Cameroons, numerous nematodes occurred which Goffart has determined as a new species, *Rhabditis gracilis*. The females measure 0.818 mm. to 1.017 mm. and the males 0.534 mm. to 0.753 mm. long. Both sexes are of slender build; the female tail is long and sharply pointed and the male tail is enclosed by a bursa which has 6 to 7 pairs of papillae. The new species belongs to a small group of the genus *Rhabditis* in which the vulva is posteriorly placed and the ovary is single, not paired as in most members of the genus. T.G.

(77b) Diethyl dioxide (Dioxan) is a satisfactory clearing medium for nematodes. The specimens taken from 70% alcohol are left overnight in the medium, cleared in clove oil for 1 to 2 hours and mounted in Canada Balsam. R.T.L.

(77c) Pintner controverts certain statements by Yamaguti [see *Jap. J. Zool.* VI (1) p. 97] regarding his description in 1913 of *Sphyricephalus viridis*. R.T.L.

## NON-PERIODICAL LITERATURE.

- 78—SCHEERER, K.—“Versuche über die Abtötung der Rinderfinne durch eine Temperatur von  $-2^{\circ}\text{C}$ .” Giessen, Dissertation, 24 pp. [1935.]

(78) Scheerer finds that *Cysticercus bovis*, rolled up in slices of meat and exposed to a temperature of  $-2^{\circ}\text{C}$ ., are killed after 7 days and are no longer infective after 6 days. He concludes that slightly infested meat, frozen so that the innermost parts of the carcass remain at  $-2^{\circ}\text{C}$ . for 6 days, might safely be offered for sale. B.G.P.